Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC. 20554

In the Matter of	)	
	)	
Revision of Parts 2 and 15	)	**ET Docket No. 03-122**
of the Commission's Rules	)	
to Permit Unlicensed National	)	
Information Infrastructure	)	
(U-NII) Devices on the 5 GHz	)	**RM-10371**
Band	)	
	)	
	)	
	)	

To: The Commission

COMMENTS of Nickolaus E. Leggett
N3NL Amateur Radio Operator

The following is a set of comments from Nickolaus E. Leggett, an amateur radio operator (Extra Class licensee – call sign N3NL), inventor (U.S. Patents # 3,280,929 and 3,280,930 and one electronics invention patent pending), and a certified electronics technician (ISCET and NARTE). My comments discuss the impact of unlicensed National Information Infrastructure (U-NII) devices on amateur radio operation on the 5 GHz band.

Political Power of Part 15 Operations

It is important to note that unlicensed Part 15 operations by consumer electronic devices have much more effective political power than licensed amateur radio operation. This political power derives from the fact that millions of 5 GHz consumer devices will be operated by millions of citizens. As a result of this situation, whenever there is an interference situation between amateur radio and the U-NII devices, amateur radio will be forced to give way.

Amateur radio stations that are already operating in full compliance with the Commission's rules will have to either significantly reduce power and/or change frequency in order to avoid fundamental overload interference with the neighbors' U-NII products. In many situations, the only way to correct this fundamental overload problem will be for the amateur radio station to stop operating on the 5 GHz band entirely.

This situation means that the regulatory protection applied to a licensed station in relation to an unlicensed Part 15 device is largely illusory. The ability of the very numerous Part 15 (U-NII) customers to complain to governmental officials removes the privileged status of the licensed operator. Shutting down millions of consumer products because of interference with amateur radio operators is not practical at all.

De Facto Power Limit for the Amateur Radio Service

The amateur radio operators sharing 5 GHz with the U-NII products will be effectively limited to the power levels used by the U-NII devices. For some amateur operations, this is an adequate power level. However, high-power amateur radio operations such as Earth-Moon-Earth (EME) moon bounce communication and over-the-horizon terrestrial communication will be prohibited on the shared frequencies by the fundamental overload interference problem.

The Commission should allow amateurs to operate at <u>especially high power levels</u> elsewhere to compensate for the loss of high power operation in the 5 GHz band segment shared with U-NII. This compensation would protect amateur radio from a net loss of privileges due to the sharing with U-NII.

Expanded Amateur Radio Use of the 5 GHz Band

Amateur radio use of the 5 GHz band and other frequency bands above VHF will increase due to the impact of Broadband over Power Line (BPL) Internet service on the high

frequency bands (2 to 80 MHz). Interference from BPL on the high frequency bands will motivate many amateur radio operators to move up to available amateur radio bands in the microwave range including 5 GHz. Refer to ET Docket 03-104 for more information on BPL.

Increased amateur radio operation on 5 GHz will cause an increased number of interference situations between amateur radio operators and U-NII products.

Suggested Actions

The Commission should modify its rules so amateur radio operators can use especially high power levels on specified segments of amateur radio microwave bands. This would compensate for the loss of high-power privileges on the 5 GHz segments. These especially high power operations would have to meet all the other relevant amateur radio regulations such as signal purity and exposure of people to RF radiation.

Respectfully submitted,

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June 30, 2003